

Atty Docket No. JCLA8476

Serial No. 10/033,752

AMENDMENTSIn The Claims:

Claim 1. (currently amended) A turbo-code fast encoding device, ~~the device is~~ suitable for the a communication system, ~~the device is suitable~~ and for outputting a parity information after ~~the~~ an encoding process on a turbo-code of ~~the~~ a sequential input, wherein, ~~the~~ an input bit sequence of the turbo-code is represented as $d = (d_1, d_2, \dots, d_k, \dots, d_N)$, where the d_k is ~~the~~ an input bit of the turbo-code fast encoding device at time k , k is from 1 to N , and N is ~~the~~ a segment length, wherein, the turbo-code fast encoding device comprisesing:

a first recursive systematic convolution (RSC) encoder; and
 a second recursive systematic convolution (RSC) encoder, wherein, the first recursive systematic convolution (RSC) encoder and the second recursive systematic convolution (RSC) encoder comply to

$$y_{1,k} = d_k + \sum_{i=1}^M g_{1,di} a_{1,k-i}$$

$$y_{2,k} = d_k + \sum_{i=1}^M g_{2,di} a_{2,k-i}$$

$$y_k = d_k + \sum_{i=1}^M g_{di} a_{k-i}$$

Wherein, d_k is the input bit and d'_k is a permutation bit of the input bit of the turbo-code fast encoding device at time k , y_k is $y_{1,k}$ and $y_{2,k}$ are the parity information corresponding to d_k and d'_k , g_{di} is $g_{1,di}$ and $g_{2,di}$ are the parameters that is generated by a first encoder feed-forward generator and a second encoder feed-forward generator, the element parameters is are either 0 or

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1, whereas, a_{k-i} is $a_{1,k-i}$ and $a_{2,k-i}$ are generated by i th register of the first encoder RSC and the second RSC encoder at time k respectively.

Claims 2-4. (cancelled)